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Pharmacy Students' Perceptions of Curriculum and Professional Roles in Erbil, Kurdistan region, Iraq: A Cross-Sectional Study

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ABSTRACT

Undergraduate perspectives are crucial for identifying misalignments between pharmacy curricula and the professional competencies required in modern clinical settings. This study assessed pharmacy students' perceptions of their curriculum, teaching quality, and professional preparedness across public and private universities. A cross-sectional analytical study was conducted between October and November 2025 among 470 undergraduate pharmacy students in their 4th and 5th years. Data were collected using an electronic questionnaire verified for content validity (S-CVI = 0.92) and internal consistency (Cronbach's $\alpha \geq 0.81$). Descriptive statistics and chi-square tests ($p < 0.05$) were used for analysis. Of the respondents, 64.7% were female and 57.7% attended private universities. Most students (64.1%) developed a more positive perception of pharmacy during their studies, and 53.9% rated teaching as good or excellent. Practical labs and workshops were identified as the most effective learning methods. Nonetheless, over half reported insufficient training in professional behaviour and problem-solving, and only 35.3% felt prepared for the job market. Significant associations ($p < 0.001$) were observed between institutional type and perceptions of teaching, research, assessment, and skill development. Despite positive perceptions of teaching quality, the critical gaps in professional training and low job market preparedness reveal substantial misalignment between academic preparation and workplace competency. Significant institutional differences indicate that public and private universities require tailored curricular reforms in experiential learning, competency-based assessments, and professional skills training to bridge the readiness gap and enhance graduates' workplace competence.

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1. INTRODUCTION

Pharmacy education plays an essential role in equipping future pharmacists to meet the evolving demands of modern healthcare. The profession has undergone a significant paradigm shift from a traditional, product-oriented focus on dispensing toward a patient-centred model emphasizing clinical care and inter-professional collaboration (Hepler & Strand, 1990). This transformation, rooted in the foundational principles of pharmaceutical care, Hepler & Strand (1990) has redefined the pharmacist's role within frontline healthcare teams. Consequently, modern pharmacy curricula must continuously evolve to align with these professional standards and ensure students are prepared to meet these new practice expectations (Keshishian & Brenton, 2011).

Despite ongoing curricular reforms and accreditation-driven improvements, the integration of patient-centred competencies into pharmacy education remains inconsistent (Wolters et al., 2021). Many students and pharmacists struggle to balance traditional dispensing duties with emerging clinical roles, often leading to a fragmented sense of professional identity. Establishing a robust professional identity requires a cohesive approach to internalizing the values and responsibilities of the practice, which is best achieved through integrated classroom learning, structured mentorship, and clinical immersion (Wiedenmayer et al., 2006; Karasneh et al., 2021).

Educational theorists believe that a curriculum should not only teach technical knowledge but also help students develop their personal and professional identities. This idea is especially important today because healthcare systems are becoming more complex with new developments like tele-pharmacy, pharmacogenomics, precision medicine, and digital therapeutics. These changes mean that pharmacy education needs to focus more on developing well-rounded skills, ethical thinking, and the ability to reflect on one's own practice (Bottacin et al., 2024).

Students' perceptions of their learning experiences reveal how well the curriculum supports their professional growth and readiness for real-world practice. When students have positive experiences, they tend to be more engaged, satisfied, and purposeful. However, if the curriculum does not match real practice needs, it can lower confidence and reduce career preparedness. Faculty, learning environments, and institutional culture also strongly shape how students see themselves as professionals (Kellar et al., 2020). research shows that good mentorship, helpful feedback, and inclusive teaching methods help students better understand their future roles and build teamwork skills with other healthcare professionals (Noble et al., 2019).

Pharmacy education still struggles to meet international standards in many developing regions including parts of the Middle East. Gaps include limited hands-on-learning opportunities, limited focus on ethics and patient-centred communication, and weak research infrastructure. Because of these gaps, pharmacy graduates find it difficult to adjust to the diverse roles needed in today's healthcare systems Bajis et al., 2018; Brown et al., 2021).

Iraq's pharmacy education system has undergone a massive structural transformation over the past two decades, characterized by a rapid, unmonitored expansion of both public and private pharmacy colleges, particularly within the Kurdistan region (Al-lela et al., 2014). While this academic expansion has drastically increased student enrolment, it has also introduced potential disparities in institutional infrastructure, teaching quality, and training standards between public and private institutions.

Despite these shifting dynamics, comprehensive evaluations of pharmacy students' curriculum perceptions and professional readiness remain heavily restricted. Existing localized data often focus on isolated clinical domains, revealing that while graduating Iraqi pharmacy students maintain highly favourable attitudes toward modern practice, their applied clinical competencies remain significantly constrained by systemic curricular limitations and educational barriers (Sabah et al., 2026). To date, no integrated study has simultaneously evaluated broad curriculum perception, teaching quality, institutional variations (public vs. private), and clinical competency gaps among senior pharmacy students (fourth and fifth year).

To bridge this gap, this study stands as the first of its kind in Erbil, Kurdistan region, Iraq. The aim of this study is to assess how pharmacy students perceive their academic programs and evolving professional roles across different institutions. By examining the direct associations between institutional categories and student perceptions, these findings offer institutional authorities and healthcare policymakers crucial, empirical feedback. Instead of relying on systemic assumptions, academic leadership can utilize these data to isolate specific curricular weaknesses, standardize clinical training quality across diverse campuses, and strategically develop pharmacy curricula that satisfy local healthcare demands while aligning with international educational standards.

2. METHODOLOGY

2.1 Study Design & Setting

This study is a cross-sectional analytical study with prospective data collection to gather data at a single point in time. The study was conducted across three pharmacy schools in the Erbil, Kurdistan Region, Iraq one public and two private institutions to capture a balanced view of pharmacy education across different institutions. The names of the universities were not disclosed to maintain institutional anonymity and avoid potential bias. The questionnaire was administered online between October 1 and November 1, 2025. Ethical approval was granted by the Koya University Faculty of General Medicine Research Ethics Committee, Department of Medical Research Center (DMRS), with meeting code 1 and paper code 1 (approved on 29/9/2025).

2.2 Study population

The target population consisted of senior undergraduate pharmacy students (fourth and fifth year) due to their sufficient exposure to the curriculum and experiential learning. Students from other faculties or programs were excluded from the study. A convenience sampling method was used to recruit available and willing students during the study period.

2.3 Sample size calculation

The sample size was determined using Cochran’s formula for a large population. Based on a 95% confidence interval and a 5% margin of error, a minimum of 384 participants was required. To enhance statistical precision and account for potential incomplete responses, A total of 600 eligible fourth- and fifth-year pharmacy students across the three selected universities were invited to participate in the survey. Out of these, 470 completed responses were successfully obtained, yielding a robust final response rate of 78.33% and a margin of error of approximately ±4.5%.

2.4 Study instrument

The survey instrument was developed by adapting items from validated Pharmacy students' perceptions of their preparedness to provide pharmaceutical care (Scott et al., 2010). This model was selected due to its established reliability in measuring students' perceived competency across diverse professional practice domains. Our instrument was subsequently tailored to the local academic context. Data was collected using a structured electronic questionnaire developed by the research team based on a literature review and expert input. The questionnaire was in English and contained closed-ended questions assessing teaching quality, curriculum relevance, assessment methods, practical exposure, communication training, professional identity formation, and technological integration. The final version of the web-based questionnaire comprised multiple distinct sections evaluating various facets of pharmacy education. General demographic and institutional information were gathered using 2 baseline items, while core domains evaluating curriculum perceptions and professional roles were measured using 6 items each, structured on a 5-point Likert scale depending on type of questions. Remaining items utilized a dichotomous (Yes/No) format to evaluate specific student experiences.

The instrument validation process followed these steps: The questionnaire instrument was developed following a comprehensive literature review and underwent a multi-stage validation process. First, face validity was established through an expert panel review (n=5 experts, including 1 professor, 2 associate professors, and 2 PhD holders) to ensure clarity and relevance. Content validity was quantified using the Content Validity Index (CVI); individual item indices (I-CVI) ranged from 0.80 to 1.00, and the overall scale-level index (S-CVI) was 0.92, indicating strong expert consensus. Following expert review, a pilot study was conducted with 20 pharmacy students to assess the feasibility and clarity of the items. Finally, internal consistency was evaluated using Cronbach's alpha coefficient, which demonstrated high reliability across the primary domains, with $\alpha = 0.84$ for the curriculum perception subscale and $\alpha = 0.81$ for the professional role subscale.

2.5 Data collection

The questionnaire was hosted online and distributed electronically through official institutional platforms and student communication channels, including university email, academic groups, and university social media pages. Distribution was facilitated directly by the dean of each university to guarantee institutional reach. Participation was completely voluntary. Prior to starting the survey, explicit, informed electronic consent was obtained through a digital form outlining the purpose of research, the voluntary nature of participation, and strict data confidentiality assurances. Clear instructions were provided online to ensure a consistent understanding of the items. Students completed the questionnaire in a single sitting to reduce interruptions and prevent duplicate responses, and strict anonymity was maintained throughout the process.

2.6 Data analysis

Data was analysed using IBM SPSS Statistics version 27. Descriptive statistics, including means, standard deviations, numbers and percentages, summarized participant demographics and responses. Associations between categorical variables were examined using chi-square tests, with significance set at $p < 0.05$.

3. RESULTS

A total of 470 pharmacy students participated in the study. The sample was predominantly female (64.7%) and overwhelmingly concentrated in the 20–25 age range (96.4%). Over half of the participants were enrolled in private institutions (57.7%). Detailed socio-demographic characteristics of the sample are presented in Table 1.

Table 1. Socio-demographic data

		N	Percentage %
Gender	Female	304	64.7%
	Male	166	35.3%
Age	20-25 years old	453	96.4%
	26-30 years old	15	3.2%
	>30 years old	1	0.2%
	<20 years old	1	0.2%
Which type of pharmacy school are you attending?	Private university	271	57.7%
	Public university	199	42.3%
Which university are you in?	Public University	190	40.4%
	Private University 1	196	41.7%
	Private University 2	84	17.9%

N: number

As presented in Table 2, since beginning the program, a clear majority of students reported a positive shift in their perception of the pharmacy profession, with 41.5% noting a somewhat more positive change and 22.6% reporting a significantly positive change. These shifting attitudes were primarily driven by extracurricular interactions with practicing pharmacists outside of formal internship as independent of the core curriculum (44.0%). Regarding overall instruction, most respondents rated teaching quality favourably (53.9% combined "good" or "excellent"), identifying Therapeutics (49.1%) and Pharmacology (35.5%) as the most beneficial courses. When evaluating instructional modalities, experiential learning environments were highly favoured; practical laboratory sessions and fieldwork were strongly preferred over traditional lectures (41.5% vs. 24.5%). Furthermore, a notable area of student dissatisfaction emerged regarding program assessments, with more than half of the participants (51.5%) expressing explicit dissatisfaction with current evaluation frameworks. When surveyed on preferred alternative modalities, project-based assessments received the highest level of student support (35.7%).

Table 2. Pharmacy students' perceptions of curriculum and teaching

		N	Percentage %
How has your perception of the pharmacy profession changed since you began your studies?	No change	58	12.3%
	Significantly more negative	35	7.4%
	Significantly more positive	106	22.6%
	Somewhat more negative	76	16.2%
	Somewhat more positive	195	41.5%
What factors most influence your perception of the pharmacy profession?	Curriculum content	52	11.1%
	Experience during internships or placements	127	27%
	How the media shows pharmacists	84	17.9%
	Interactions with practicing pharmacists	207	44%
How effective is the teaching provided in your pharmacy program?	Excellent	53	11.3%
	Good	200	42.6%
	Average	138	29.4%
	Poor	51	10.9%
	Very poor	28	6%
Do the teaching methods help you understand the lessons well?	Yes	253	53.8%
	No	217	46.2%
What teaching methods do you think are most effective for this curriculum?	Engaging activities such as workshops or group discussions.	131	27.9%
	Lectures	115	24.5%
	Online courses	23	4.9%
	Practical labs or fieldwork	195	41.5%
What course is the most beneficial?	Basic science courses	7	1.5%
	Pharmaceutical chemistry	19	4%
	Pharmaceutical technology	36	7.7%
	Pharmacognosy	10	2.1%
	pharmacology	167	35.5%
	Therapeutics	231	49.1%
Are you satisfied with research courses in curriculum?	Yes	257	54.7%
	No	213	45.3%
How balanced are the theoretical courses with practical training in your curriculum?	Highly balanced	47	10%
	Moderately balanced	146	31.3%
	Slightly balanced	154	32.8%
	Unbalanced	92	19.6%
	Highly Unbalanced	31	6.6%
How well does your pharmacy program include new technologies like digital health and artificial intelligence?	Very well	66	14%
	Well	127	27%
	Moderately	136	28.9%
	Slightly	83	17.7%
	Not well at all	58	12.3%
Are you satisfied with assessments (exam, reports, assignment, activity)?	Yes	225	47.9%
	No	242	51.5%
How do you think assessments should be conducted in the curriculum?	Continuous Assessment (quizzes, weekly assignments, homework, class participants, reflections)	109	23.2%
	Evaluations conducted by fellow students	73	15.5%
	Project-Based	168	35.7%
	Written Exams	120	25.5%

N: number

As shown in Table 3, Regarding professional preparation, the largest segment of students (39.8%) rated the program as moderately effective, while the remainder of the sample was evenly divided between high efficacy ratings (31.7% combined "very" or "extremely" effective) and low efficacy ratings (28.5%

combined). For job market readiness, the single largest group felt somewhat prepared (32.8%), followed closely by those who felt fully prepared (35.3% combined). When evaluating specific competencies, distinct gaps in the curriculum emerged: a clear majority of respondents noted a lack of adequate training in workplace professional behaviour (56.4%) and problem-solving skills (52.8%). Conversely, a 53.6% majority agreed that leadership and teamwork skills were effectively fostered. Despite the identified training gaps, the overall sentiment regarding real-world confidence was highly encouraging, with nearly half of the students expressing solid assurance in their abilities (47.8% combined "confident" or "very confident"), compared to 22.6% who reported a definitive lack of confidence.

Table 3. Pharmacy students' perceptions of professional readiness

		N	Percentage %
How effectively does your pharmacy program prepare you for the professional responsibilities of a pharmacist?	Extremely effective	47	10%
	Very effective	102	21.7%
	Moderately effective	187	39.8%
	Slightly effective	78	16.6%
	Not effective at all	56	11.9%
Considering the current job market, how prepared do you feel to compete for employment after graduation?	Extremely prepared	48	10.2%
	Prepared	118	25.1%
	Somewhat prepared	154	32.8%
	Not prepared	91	19.4%
	Not prepared at all	59	12.6%
Does the curriculum provide adequate training on professional behavior in the workplace?	Yes	205	43.6%
	No	265	56.4%
Are problem-solving skills adequately addressed within the program?	Yes	222	47.2%
	No	248	52.8%
Are leadership and teamwork skills effectively fostered through the program?	Yes	252	53.6%
	No	218	46.4%
How confident are you about your ability to apply your knowledge in a real-world setting?	Very confident	89	18.9%
	Confident	136	28.9%
	Somewhat confident	139	29.6%
	Not confident	67	14.3%
	Not confident at all	39	8.3%

N: number

Table 4. Associations between type of pharmacy school/university and students' perceptions of curriculum and professional readiness (N = 470)

Outcome variable	Grouping variable	χ^2	df	p-value
Rating of teaching staff quality	Type of pharmacy school	19.386	4	<0.001
Rating of teaching staff quality	University	33.041	4	<0.001
Balance of theoretical and practical training	University	35.744	4	<0.001
Satisfaction with research courses	Type of pharmacy school	8.796	1	0.003
Satisfaction with research courses	University	11.915	2	0.003
Satisfaction with assessments (exam, reports, assignments, activity)	Type of pharmacy school	38.821	2	<0.001
Inclusion of new technologies (digital health, AI)	University	29.612	8	<0.001
Effectiveness of teaching	University	45.070	8	<0.001
Effectiveness of teaching	Type of pharmacy school	52.300	8	<0.001
Adequate training on professional behaviour in workplace	Type of pharmacy school	20.070	1	<0.001
Adequate training on professional behaviour in workplace	University	24.224	2	<0.001
Problem-solving skills development	Type of pharmacy school	11.324	1	<0.001
Problem-solving skills development	University	19.848	2	<0.001
Leadership and teamwork skills	Type of pharmacy school	4.795	1	0.029
Leadership and teamwork skills	University	3.541	2	0.170

Note: ns = not significant.

Table 4 shows Chi-square (X^2) analysis demonstrated that institutional factors were significantly associated with most student evaluations. Both the type of pharmacy school and the specific university attended exerted a highly significant impact on how students perceived core academic dimensions, including teaching staff quality, workplace professional behaviour training, and problem-solving skill development ($p < 0.001$ for all). Furthermore, satisfaction with research courses was significantly associated with both institutional variables ($p = 0.003$). Distinct institutional influences were also observed,

with the type of school uniquely associated with assessment satisfaction ($p < 0.001$), while the specific university significantly impacted perceptions of curriculum balance and new technology integration ($p < 0.001$). Notably, while leadership and teamwork development did not significantly differ across specific universities ($p = 0.170$), it was significantly associated with the overarching type of pharmacy school attended ($p = 0.029$).

4. DISCUSSION

In this study, females accounted for 64.7% of the surveyed pharmacy students. This finding is consistent with international demographic shifts toward a female-majority profession. For comparison, the American Association of Colleges of Pharmacy (AACP) reports that female enrolment consistently makes up roughly two-thirds of pharmacy student cohorts in the United States (American Association of Colleges of Pharmacy [AACP], 2023). This high female representation is often linked to student expectations of flexible working hours and a manageable career-family balance, which is a pattern also noted in Canadian study (Janzen et al., 2013). However, in Iraq's developing education system, this demographic shift should not be viewed merely as a metric of shifting gender parity; rather, it represents a pressing institutional demand. Local academic institutions must expand their clinical rotation capacities proportionally so that larger class sizes do not reduce the availability or quality of experiential training sites.

Our results also show a high concentration of students in private universities (57.7%) compared to the public university (42.3%). This distribution is the direct empirical consequence of rapid private-sector expansion in Kurdistan region over the last decade, where private programs now outnumber public ones five to one. While this growth has increased student capacity, our analysis shows a significant association between the type of university and core educational outcomes ($p < 0.001$). This aligns with international evidence suggesting that rapid, demand-driven privatization often characterized by institutional isomorphism and market-led growth frequently leads to significant disparities in resource allocation, faculty qualifications, and learning outcomes (Marshall, 2023). Consequently, the rapid expansion of private pharmacy education has created imbalances in training quality, making the choice of institution a primary driver of the student learning experience.

Regarding teaching methods, our data shows a clear preference for active learning over traditional lectures. Although a modest majority of students rated teaching quality (53.9%) and comprehension support (53.8%) as good or excellent, the overwhelming student preference for practical laboratories (41.5%) and interactive group discussions (27.9%) exposes a clear pedagogical gap in current teaching frameworks. These preferences support previous findings showing that active, learner-centred methods like problem-based learning and case studies improve understanding more effectively than passive instruction (Alahmar, 2018; Plewka et al., 2023). Additionally, the high student interest in applied fields like pharmacology (35.5%) and therapeutics (49.1%) matches trends among Canadian pharmacy students, who prioritize patient focused courses over basic sciences. Despite these positive curricular preferences, our study reveals a major gap in professional readiness. The finding that more than half of the students reported inadequate training in professional behaviour (56.4%) and problem-solving (52.8%) points to a profound readiness deficit. This deficit is a direct consequence of the historical curriculum structure in Iraq, which has long focused on basic, product-oriented sciences and lacked structured clinical clerkships (Taylor et al., 2022). Ultimately, these findings suggest that improving student preparedness requires a shift from rote memorization to practical clinical decision-making.

Confidence in applying knowledge in real-world settings is limited, and nearly half of the students perceive leadership and teamwork training as insufficient. In Iraq, several structural and curricular challenges contribute to these outcomes. Historically, pharmacy education in Iraq has been criticized for being product-oriented and basic-science heavy, with insufficient emphasis on clinical training, experiential learning, and modern teaching methodologies such as problem-based learning and practical simulations. A review of pharmacy education developments in Iraq noted that clinical and practical components have "not received adequate attention," and that shortages in qualified faculty and teaching infrastructure further limit students' exposure to real-world professional training (Al-lela et al., 2014).

This lack of preparedness is not unique to our setting and points to a broader regional issue. Similar gaps in administrative and research confidence have been documented among pharmacy students in Saudi Arabia (Mahmoud et al., 2025), showing a shared regional vulnerability to non-experiential curricula. While longitudinal data from Western cohorts demonstrates that student confidence increases steadily as practical training is built into the curriculum (Scott et al., 2010). When asked about their preparedness to compete in the current job market, our study revealed that only 35.3% of students felt extremely prepared or prepared. In Iraq, pharmacy graduates have several potential career paths, including medical marketing and sales, community pharmacy, hospital pharmacy, and continuing postgraduate studies. Despite these opportunities, many students perceive gaps in their training that limit confidence in securing and excelling in these roles. Contributing factors include curricula that are mostly theoretical, limited experiential learning, and insufficient exposure to practical skills required in the workplace. In contrast, in developed countries, pharmacy curricula are often designed to progressively integrate clinical experiences, patient care training, and competency-based assessments, which helps students feel more prepared for professional practice. Structured internships, rotations in hospitals and community pharmacies, and exposure to real-world pharmaceutical care equip graduates with the confidence and skills needed to compete effectively in diverse job markets. This situation contrasts sharply with developed nations, where pharmacy education has shifted toward highly integrated tracks that build extensive, mandatory clinical rotations directly into the core syllabus (McMullen et al., 2023).

Significant associations were observed between the type of pharmacy school and university and several key outcomes. Students from different institutions varied notably in their perceptions of teaching staff quality, balance between theoretical and practical training, satisfaction with research courses and assessments, and overall teaching effectiveness ($p < 0.001$). These results indicate that institutional factors such as faculty experience, resources, and curriculum structure strongly influence students' learning experiences and preparedness. Likewise, significant associations were found for professional behaviour and problem-solving skill development, suggesting that some institutions offer more effective training in professional competencies than others. Similarly, a study in Jordan found that the type of university had a strong and significant correlation with job field, graduates' nationality, satisfaction, and cost of study ($p < 0.001$) (Jaber, 2022).

5. LIMITATIONS

This study has several limitations that should be acknowledged. First, the use of a cross-sectional design captures students' perceptions at a single point in time and does not account for changes over the course of their academic progression. Second, the data were self-reported, which may introduce response bias or social desirability effects. Third, although the study included both public and private universities in Erbil,

the findings may not be generalizable to all pharmacy programs in the Kurdistan Region or Iraq more broadly. Additionally, the questionnaire, while comprehensive, was not triangulated with qualitative data such as interviews or focus groups that could have provided deeper insights into students lived experiences. Finally, the study did not assess actual competency or performance outcomes, limiting the ability to correlate perceptions with measurable academic or professional readiness.

6. CONCLUSION

This study evaluated pharmacy students' perceptions of curriculum and professional readiness in Erbil, Kurdistan region, Iraq. The findings indicate a misalignment between academic preparation and workplace expectations, characterized by significant institutional disparities. While teaching quality is generally rated favourably, a substantial gap exists in practical skill development, particularly regarding professional behaviour and problem-solving. Data analysis revealed that institutional type is a primary predictor of student perceptions across key academic domains ($p < 0.001$). This correlation suggests that the recent, rapid expansion of private pharmacy programs has not been matched by a standardized approach to quality assurance, resulting in uneven distribution of faculty resources and experiential training opportunities. Given the cross-sectional nature and self-reported data of this study, these results should be interpreted as indicators of student perception rather than objective measures of graduate competency. These findings suggest that authorized stakeholders and academic leaders should consider implementing strategic reforms to bridge current readiness deficits.

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CONFLICT OF INTEREST STATEMENT

The authors declare no potential conflicts of interest.

AUTHORS' CONTRIBUTIONS

Aya Diyar Bilal & Ali Omar Yassen: Data analysis, Methodology, Formal analysis, Writing–original draft. **Asiya Jalil Abdulla:** Data collection. **Ali Omar Yassen**: Visualization, Methodology, Writing – review & editing. **Suzan Bilal Wahhab**: Ethic approval, Visualization, Resources, Draft corrections. **Ali Omar Yassen**: Supervision, Funding acquisition, Writing – review & editing.

DECLARATION OF GENERATIVE AI IN THE WRITING PROCESS

During the preparation of this work, the authors used ChatGPT (OpenAI) and Grammarly solely for language refinement and improvement of manuscript readability. The authors reviewed and edited all generated content and take full responsibility for the content of this publication.

ETHICS STATEMENT

Ethical approval was granted by the Koya University Faculty of General Medicine Research Ethics Committee, Department of Medical Research Center (DMRS), with meeting code 1 and paper code 1 (approved on 29/9/2025). An electronic informed consent was obtained from the respondents prior to the survey activity.

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